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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,753	12/09/2003	Dennis R. Morrison	MSC-23277-1	1973
24957	7590	09/07/2005	EXAMINER	
NASA JOHNSON SPACE CENTER MAIL CODE HA 2101 NASA RD 1 HOUSTON, TX 77058			NGUYEN, TU T	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/734,753

Applicant(s)

MORRISON, DENNIS R.

Examiner

Tu T. Nguyen

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rowe (4,075,462) in view of Ortyn et al (6,532,061).

With respect to claim 1, Rowe disclose a device for analyzing microparticles. The device comprises: a chamber 25 (fig 1) comprising inlets 17,20,23 (fig 1) and an outlet 11 (fig 2) for respectively introducing and dispensing a flowing fluid comprising micropmicles; a light source 14 (fig 1) adapted to provide incident light through the chamber; an imaging system 32 (fig 1) configured to acquire images of the flowing fluid within the chamber.

Rowe does not explicitly disclose the claimed photometer configured to measure the intensity of light transmitted through individual microparticles. Ortyn discloses a system for determining characteristics of particles. The system comprises: a plurality of photometer 50, 50a (fig 43) for measuring the intensity of the light. It would have been obvious to modify Rowe with the photometer as taught by Ortyn to measure a plurality of characteristics of the particles.

With respect to claims 2,26, Ortyn discloses using a multiple light sources 12,12a (fig 11) at different wavelengths.

With respect to claims 3-4, Rowe does not disclose a laminar flow of fluid. However, it would have been obvious to modify Rowe to use the system in different flow patterns or different channel sizes.

With respect to claims 5-6, Rowe discloses a controller 37 (fig 1) and a storage medium 35,36 (fig 1) for controlling the fluid flow and analyzing the images.

With respect to claim 7, Rowe discloses a magnification lens (column 5, lines 40-42).

With respect to claim 8, Ortyn discloses using a mirror 76 (fig 9) for splitting or directing light. It would have been obvious to modify Rowe with the mirror taught by Ortyn to facilitate the measuring.

With respect to claim 9, it would have been obvious to modify Rowe's system to operate from battery power to make the system portable.

With respect to claim 10, refer to discussion in claim 1 above for the system and claim 5 for the storage and controller. Further, Rowe discloses identifying,

characterizing and determining a quantity of the particles (column 1, lines 5-15). Rowe does not disclose the claimed optical view ports. However, the claimed chamber having optical view ports would have been known. It would have been obvious to modify Rowe with the known chamber having optical view ports to view the fluid in the chamber easier.

With respect to claims 11-12, Ortyn discloses using filters (column 6, lines 35-41) and classifying different types of particles (column 1, lines 45-60). It would have been obvious to modify Rowe with the filters and the function for classifying different types of particles to measure a plurality of characteristics of the particles at the same time.

With respect to claims 13-17, it would have been obvious to modify Rowe's system with a program instructions to perform all the functions as claimed to measure any desired characteristics of the sample faster.

With respect to claim 18, refer to discussion in claim 1 above for the system. Ortyn does not disclose comparing intensities of different images. Ortyn discloses classifying particles by analyzing different images of the particles (column 18, lines 5-15). It would have been obvious to modify Ortyn with the claimed comparing step to characterize the particles more accurate.

With respect to claims 19-20, it would have been obvious a design choice to modify Rowe with a light source having a spectrum of light or the flow rate as claimed to measure different type of particles.

With respect to claims 21-24, it would have been obvious to modify Rowe with the claimed limitations to measure different characteristics of the particle or to modify Rowe by comparing the detected intensities or the images to facilitate the measuring.

With respect to claim 25, refer to claim 1 for the system and claim 3 for the laminar-flow.

With respect to claim 27, refer to discussion in claim 8 for the mirror and claim 11 for the filters.

With respect to claim 28, the claimed cleaning system would have been known. It would have been obvious to modify Rowe with the known cleaning system to clean the chamber before and after each test to facilitate the measuring.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley Jr. can be reached on (571) 272-2800 Ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu T. Nguyen
Primary Examiner
Art Unit 2877

08/30/2005